

CENTER FOR BIOREMEDIATION

CENTER

The Center for Bioremediation was established in 1996, to facilitate development, enhancement, and marketing of technologies based on microorganisms, biological materials, and cellular protein and enzyme components for bioremediation and environmental restoration applications. Microorganisms can be thought of as chemical factories, which in the process of growing and reproducing, metabolize and transform organics and inorganics (arsenic, nitrates, etc.) for energy and respiration. In this process metals can be transformed to more stable, less soluble, and/or less toxic states. The Center for Bioremediation develops, implements, and markets innovative biotechnologies to solve one of the most complex and widespread remediation problems - metals contamination.

TECHNOLOGY

The Center focus is on the commercialization of various aspects of microbial bioremediation technologies including, selenium removal/recovery, arsenic removal/recovery and cyanide destruction. Commercial applications of microbes, biopolymers/enzymes and bioprocesses are being explored. The Center is pursuing partnerships and collaborations with industry, federal agencies and universities in various areas of bioremediation.

ACCOMPLISHMENTS

A patent application for the selenium removal technology is in progress. This technology is scheduled for testing under the EPA Mine Waste Technology Program in Spring 1999. Pilot scale studies are planned with a Utah mining company and the Bureau of Reclamation. The Center has started collaborating with the Weber Basin Water District and the Bureau of Reclamation to develop proposals for water quality improvement. Under contract from the USDA Forrest Service, the Center is examining *Bacillus thuringiensis* (a bacterium with insecticidal properties) insecticides use on the Wasatch Front. Also under contract from NEDO the Center is examining the water quality in an innovative municipal waste treatment process.

CONTACT

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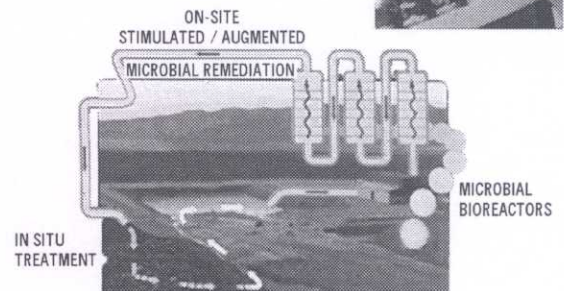
Can You Imagine...

... using enhanced microorganisms that will consume and neutralize hazardous heavy metals and other toxic materials in contaminated waste sites?

BIOREMEDIATION IS THE USE OF BIOLOGY AND TECHNOLOGY TO CLEAN UP ENVIRONMENTAL POLLUTANTS AND RECLAIM SOIL AND WATER SYSTEMS.

CENTER FOR BIOREMEDIATION

DEVELOPING INNOVATIVE BIOTECHNOLOGIES FOR REMEDIATION, STABILIZATION, AND/OR RECOVERY OF METALS, OTHER INORGANICS, METAL-ORGANICS, AND ACID DRAINAGE



■ Block diagram of typical site remediation process.